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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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22917	7590	06/30/2005	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			FOX, BRYAN J	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/001,380	Applicant(s) CARLBORG ET AL.	
	Examiner Bryan J Fox	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-13, 15-22, 24-31 and 33-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-13, 15-22, 24-31 and 33-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 5, 8, 10-13, 15, 18, 20-22, 24, 27, 29-31, 33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schelte-Kellinghaus (US006510322B1) in view of Emilsson et al. (US006498788B1).

Regarding **claim 1**, Schelte-Kellinghaus discloses a switching center that enables the subscriber of the mobile cellular network to reserve communication capacity in a specific area and within a specific time frame (see column 2, lines 59-62), which reads on the claimed "method for allocating air interface resources for a user in a wireless communication system". A request checking unit 20 shown in figure 2 is adapted to check the admissibility of a request submitted to the switching center 10 by scanning all cells being affected by the submitted and compares the requested

communication capacity with the available communication capacity over the period of time specified in the request (see column 5, lines 57-63) and the request includes a request for a communication bandwidth (see column 8, lines 40-50), which reads on the claimed "evaluating at least one received air interface resource reservation parameter associated with the user, to determine whether a bandwidth of an air interface resource is available for the user at a defined future time". After the subscriber submits a request for a communication bandwidth at a time $T(\text{request})$ and the switching center 10 either rejects or confirms this request at a time $T(\text{answer})$ (see column 8, lines 40-43), which reads on the claimed "generating an air interface resource reservation response for the user in response to the evaluated received air interface resource reservation parameter". Schelte-Kellinghaus fails to expressly disclose negotiating with the user to determine alternative air interface resource requirements based on demands for air interface resources.

In a similar field of endeavor, Emilsson et al disclose a method for allocating radio resources according to a service requirement specified by the user where a service goal is negotiated and perhaps restricted (see column 6, line 57 – column 7, line 17). It is possible for the service goal to be renegotiated, for example, if a user wishes to add an application (see column 7, lines 18-45), which reads on the claimed, "negotiating with the user to determine alternative air interface resource requirements based on demands for air interface resources."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Schelte-Kellinghaus with Emilsson et al to include the above

service negotiation and renegotiation in order to make efficient use of a radio resource as suggested by Emilsson et al (see column 1, lines 58-64).

Regarding **claim 11**, Schelte-Kellinghaus discloses a switching center that enables the subscriber of the mobile cellular network to reserve communication capacity in a specific area and within a specific time frame (see column 2, lines 59-62), which reads on the claimed "method for allocating air interface resources for a user in a wireless communication system". A request checking unit 20 shown in figure 2 is adapted to check the admissibility of a request submitted to the switching center 10 by scanning all cells being affected by the submitted and compares the requested communication capacity with the available communication capacity over the period of time specified in the request (see column 5, lines 57-63) and the request is for a communication bandwidth (see column 8, lines 40-50). The submitted request must first be generated and reads on the claimed "generating an air interface resource reservation parameter associated with the user, for use in determining whether a bandwidth of an air interface resource is available for the user at a defined future time". After the subscriber submits a request for a communication bandwidth at a time $T(\text{request})$ and the switching center 10 either rejects or confirms this request at a time $T(\text{answer})$ (see column 8, lines 40-43). A rejection or confirmation notification is sent to the MS (see column 12, lines 33-64). Since the notification is generated, it follows that it is evaluated, which reads on the claimed "evaluating an air interface resource reservation response that was generated in response to the air interface resource reservation parameter, to determine availability of the bandwidth". Schelte-Kellinghaus

fails to expressly disclose negotiating to determine alternative air interface resource requirements based on demands for air interface resources.

In a similar field of endeavor, Emilsson et al disclose a method for allocating radio resources according to a service requirement specified by the user where a service goal is negotiated and perhaps restricted (see column 6, line 57 – column 7, line 17). It is possible for the service goal to be renegotiated, for example, if a user wishes to add an application (see column 7, lines 18-45), which reads on the claimed, “negotiating to determine alternative air interface resource requirements based on demands for air interface resources.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Schelte-Kellinghaus with Emilsson et al to include the above service negotiation and renegotiation in order to make efficient use of a radio resource as suggested by Emilsson et al (see column 1, lines 58-64).

Regarding **claim 20**, Schelte-Kellinghaus discloses a switching center that enables the subscriber of the mobile cellular network to reserve communication capacity in a specific area and within a specific time frame (see column 2, lines 59-62), which reads on the claimed “wireless network element comprising a RF transceiver”. A request checking unit 20 shown in figure 2, which reads on the claimed “air interface resource reservation processor”, is adapted to check the admissibility of a request submitted to the switching center 10 by scanning all cells being affected by the submitted and compares the requested communication capacity with the available communication capacity over the period of time specified in the request (see column 5,

lines 57-63) and the request is for a communication bandwidth (see column 8, lines 40-50), which reads on the claimed "evaluate at least one received air interface resource reservation parameter associated with the user, to determine whether a bandwidth of an air interface resource is available for the user at a defined future time". After the subscriber submits a request for a communication bandwidth at a time $T(\text{request})$ and the switching center 10 either rejects or confirms this request at a time $T(\text{answer})$ (see column 8, lines 40-43). A rejection or confirmation notification is sent to the MS (see column 12, lines 33-64), which reads on the claimed "generate an air interface resource reservation response to the RF transceiver, in response to the evaluated received air interface resource reservation parameter". Schelte-Kellinghaus fails to expressly disclose negotiating with the user to determine alternative air interface resource requirements based on demands for air interface resources.

In a similar field of endeavor, Emilsson et al disclose a method for allocating radio resources according to a service requirement specified by the user where a service goal is negotiated and perhaps restricted (see column 6, line 57 – column 7, line 17). It is possible for the service goal to be renegotiated, for example, if a user wishes to add an application (see column 7, lines 18-45), which reads on the claimed, "the air interface resource reservation processor negotiates with the user to determine alternative air interface resource requirements based on demands for air interface resources."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Schelte-Kellinghaus with Emilsson et al to include the above

service negotiation and renegotiation in order to make efficient use of a radio resource as suggested by Emilsson et al (see column 1, lines 58-64).

Regarding **claim 29**, Schelte-Kellinghaus discloses a switching center that enables the subscriber of the mobile cellular network to reserve communication capacity in a specific area and within a specific time frame (see column 2, lines 59-62). A request checking unit 20 shown in figure 2 is adapted to check the admissibility of a request submitted to the switching center 10 by scanning all cells being affected by the submitted and compares the requested communication capacity with the available communication capacity over the period of time specified in the request (see column 5, lines 57-63) and the request is for a communication bandwidth (see column 8, lines 40-50). The request is submitted by the subscriber (see figure 7), which reads on the claimed "processing device...operative to output an air interface resource reservation parameter associated with the remote wireless unit, to determine if a bandwidth of an air interface resource is available for the remote wireless unit at a defined future time". After the subscriber submits a request for a communication bandwidth at a time $T(\text{request})$ and the switching center 10 either rejects or confirms this request at a time $T(\text{answer})$ (see column 8, lines 40-43). A rejection or confirmation notification is sent to the MS (see column 12, lines 33-64). It follows that the subscriber evaluates the response or there would be no need for generating it, which reads on the claimed "evaluate an air interface resource reservation response that was generated in response to the air interface resource reservation parameter, to determine availability of bandwidth". Schelte-Kellinghaus fails to expressly disclose negotiating to determine

alternative air interface resource requirements based on demands for air interface resources.

In a similar field of endeavor, Emilsson et al disclose a method for allocating radio resources according to a service requirement specified by the user where a service goal is negotiated and perhaps restricted (see column 6, line 57 – column 7, line 17). It is possible for the service goal to be renegotiated, for example, if a user wishes to add an application (see column 7, lines 18-45), which reads on the claimed, “the processing device negotiates to determine alternative air interface resource requirements based on demands for air interface resources.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Schelte-Kellinghaus with Emilsson et al to include the above service negotiation and renegotiation in order to make efficient use of a radio resource as suggested by Emilsson et al (see column 1, lines 58-64).

Regarding **claims 2, 12, 21 and 30**, the combination of Schelte-Kellinghaus and Emilsson et al discloses that the switching center 10 can first analyze the submitted request at least including the information reservation start time $t(s)$, reservation end time $t(e)$, requested communication capacity, and information about the area where communication capacity is to be reserved (see Schelte-Kellinghaus column 9, lines 3-11), which reads on the claimed “air interface resource reservation parameter includes at least one of: a position of a communication unit associated with the user, a time of day, a date, a desired bit rate for the defined future time...”.

Regarding **claims 3, 13, 22 and 31**, the combination of Schelte-Kellinghaus and Emilsson et al discloses that the request is for a communication bandwidth (see Schelte-Kellinghaus column 8, lines 40-50), which reads on the claimed “air interface reservation resource request to reserve the bandwidth”.

Regarding **claims 5, 15, 24 and 33**, the combination of Schelte-Kellinghaus and Emilsson et al discloses that if the resources are available, the requested communication capacity will be confirmed via a USSD-notification to the dialogue-initiating mobile station MS (see Schelte-Kellinghaus column 12, lines 30-44), which reads on the claimed “air interface resource reservation response includes confirmation data indicating that the bandwidth will be available for the user at the defined future time”.

Regarding **claims 8 and 27**, the combination of Schelte-Kellinghaus and Emilsson et al discloses that the request checking unit checks the admissibility of a request submitted to the switching center by scanning all cells being affected by the submitted request and compares the requested communication capacity with the available communication capacity over the period of time specified in the request (see Schelte-Kellinghaus column 5, lines 56-63), and the request is either accepted if capacity is available over the specified time or rejected if not (see Schelte-Kellinghaus column 6, lines 21-45), which reads on the claimed “determining the defined time based on the air interface resource reservation parameter and based on air interface resource usage data”. Furthermore, the operator can specify maximum and minimum time

periods within a cell for a specific day or time (see Schelte-Kellinghaus column 11, lines 30-38).

Regarding **claim 10**, the combination of Schelte-Kellinghaus and Emilsson et al discloses in one embodiment that the mobile station actual/current position and /or cell is permanently monitored (see Schelte-Kellinghaus column 7, lines 23-37), which reads on the claimed "locating the user an agreed reservation time approaches".

Regarding **claim 18**, the combination of Schelte-Kellinghaus and Emilsson et al discloses that the request checking unit checks the admissibility of a request submitted to the switching center by scanning all cells being affected by the submitted request and compares the requested communication capacity with the available communication capacity over the period of time specified in the request (see Schelte-Kellinghaus column 5, lines 56-63). The time period is specified in the request, which reads on the claimed "transmitting the desired time as an air interface reservation parameter".

Regarding **claim 36**, the combination of Schelte-Kellinghaus and Emilsson et al discloses that the request checking unit checks the admissibility of a request submitted to the switching center by scanning all cells being affected by the submitted request and compares the requested communication capacity with the available communication capacity over the period of time specified in the request (see Schelte-Kellinghaus column 5, lines 56-63). The time period is specified in the request, which reads on the claimed "the processing device provides the defined time as an air interface resource reservation parameter".

Claims 7, 9, 17, 19, 26, 28, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Schelte-Kellinghaus and Emilsson et al in view of Shaheen et al (US006374109B1).

Regarding **claims 7, 17, 26 and 35**, the combination of Schelte-Kellinghaus and Emilsson et al fails to disclose a broadcast message with resource usage information.

In a similar field of endeavor, Shaheen et al discloses a wireless communication system including broadcast message units to broadcast messages within the service area relating to the manner in which the subscribing units operate within the service area (see column 5, lines 14-22). These broadcast messages may include frequency band information, channel information, protocol information and such other information as is helpful in managing communications within the service area and the subscriber units receive the broadcast messages and, based upon the broadcast messages, determine in which channels and according to which protocols to operate (see column 6, lines 1-34).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Schelte-Kellinghaus and Emilsson et al with Shaheen et al to include the above broadcast messages in order to provide a wireless communication system that efficiently causes subscribing units to operate among the various available frequency bands and protocols as suggested by Shaheen et al (see column 2, lines 62-67).

Regarding **claims 9, 19, 28 and 37**, the combination of Schelte-Kellinghaus and Emilsson et al fails to expressly disclose the air interface resource usage information includes at least one of: surrounding cell usage data, current loading of a cell broadcasting the air interface resource usage information and an estimated time to wait for desired air interface resources.

In a similar field of endeavor, Shaheen et al discloses that the broadcast messages may include information describing the capacity and capabilities of neighboring base stations, traffic on the broadcasting base station, traffic on neighboring base stations and various other types of information (see Shaheen et al column 6, lines 15-24).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Schelte-Kellinghaus and Emilsson et al with Shaheen et al to include the above broadcast messages in order to provide a wireless communication system that efficiently causes subscribing units to operate among the various available frequency bands and protocols as suggested by Shaheen et al (see column 2, lines 62-67).

Claims 6, 16, 25 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Schelte-Kellinghaus and Emilsson et al in view of Linneweh, Jr. et al (US005862485A).

Regarding **claims 6, 16, 25 and 34**, the combination of Schelte-Kellinghaus and Emilsson et al suggests that the invention may easily adapt to fit other standards (see Schelte-Kellinghaus column 13, lines 1-7).

In a similar field of endeavor, Linneweh, Jr. et al discloses a system that reserves communication resources for a communication unit (see column 2, lines 34-58) that specifically may be used with a CDMA system (see column 2, line 67 – column 3, line 15).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Schelte-Kellinghaus and Emilsson et al with Linneweh, Jr. et al to include the above use with a CDMA system in order to enhance the versatility of the system by providing more compatibility.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-13, 15-22, 24-31 and 33-37 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bryan Fox
June 15, 2005

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